

REMARKS

Initially, Examiner Guertin is thanked for the courtesy extended to the undersigned during the telephonic conversations on May 7, 2009. The substance of those discussions is reflected in this paper below where appropriate.

By this Reply, claims 1, 8-10, 13, 14, 19, 26-28, 31 and 32 are canceled without prejudice or disclaimer of the subject matter therein, claims 2, 3, 5, 11, 15, 17, 18, 20, 21, 23, 29, 33, 35, 36, 42, 44 and 46 are amended and new dependent claims 48-69 are added. Claims 2-7, 11, 12, 15-18, 20-25, 29, 30 and 33-69 are thus pending in this application, with claims 11, 15, 29, 33, 37, 42, 44 and 46 being independent. Support for the claim amendments and new claims can be found throughout the disclosure. *See, e.g.*, specification at ¶ 0022-0024, 0028, 0036-0061, 0078.

In the Office Action of February 9, 2009 (“Office Action”), claims 1-10, 13, 14, 17 and 18¹ stand rejected under 35 U.S.C. § 101; claims 1-3, 5-9, 13, 17-21, 23-27, 31, 36 and 42-47 stand rejected under 35 U.S.C. 103(a) based on U.S. Patent No. 6,462,748 (“*Fushiki*”) in view of U.S. Patent Application Pub. No. US 2002/0031256 (“*Hiramatsu*”), in further view of U.S. Patent Application Pub. No. US 2002/0083859 A1 (“*Hauck*”); and claims 4, 10, 14, 22, 28 and 32 stand rejected under 35 U.S.C. 103(a) based on *Fushiki*, *Hiramatsu* and *Hauck* further in view of U.S. Patent Application Pub. No. 2003/0142222 A1 (“*Hordley*”).

Claims 37-41 are allowed,² and the Office Action indicated that claims 11, 12, 15, 16, 29, 30, 33 and 34, which are objected to as being dependent upon a rejected base claim, are drawn to allowable subject matter.

The Examiner’s indication of allowable subject matter is acknowledged with appreciation. The rejections and objections set forth in the Office Action should be withdrawn and all pending claims should be allowed for the reasons discussed below.

¹ Claim 19 is included in the statement of rejection on page 2 (item 2) of the Office Action but, as the Examiner confirmed by telephone on May 7, 2009, claim 19 was unintentionally included in the rejection and is not rejected under section 101.

² Claims 37-41 are included in the statement of rejection on page 18 (item 24) of the Office Action but are indicated as allowed on the Office Action Summary and at pages 25 and 27 (items 29 and 36) of the Office Action. As the Examiner confirmed by telephone on May 7, 2009, claims 37-41 are in fact allowed.

Allowed claims 37-41

The Office Action indicated that independent claim 37 and its dependent claims 38-41 are allowable. *See* Office Action at 25, 27. Claims 37-41 are not amended herein and remain in the form indicated as allowable.

Allowable subject matter of claims 11, 15, 29 and 33

The Office Action indicated that claims 11, 12, 15, 16, 29, 30, 33 and 34 are drawn to allowable subject matter. *See* Office Action at 25-27. The allowable subject matter recited in claim 11 is rewritten in independent form with features of base claim 1 and intervening claims 8, 9 and 10. In a similar fashion, the allowable subject matter recited in claim 15 is rewritten in independent form with features of base claim 1 and intervening claims 8, 13 and 14. *Fushiki, Hiramatsu, Hauck and Hordley*, whether taken alone or in any combination, fail to anticipate or render obvious claims 11 and 15, as currently presented. Additionally, as explained below, claims 11 and 15 are amended to explicitly tie the claims to a particular machine or apparatus. As discussed with the Examiner on May 7, 2009, claims 11 and 15 are believed to be in condition for allowance.

Claims 2-7, 12, 17 and 18 now depend upon claim 11, and new claims 54-61 (which parallel dependent claims 2-7, 12, 17 and 18) depend upon claim 15. Dependent claims 2-7, 12, 17 and 18 and 54-61 should be allowed over the applied art for at least reasons similar to those in connection with the corresponding base claims 11 and 15. The timely allowance of independent claims 11 and 15, and their respective dependent claims, is accordingly requested.

The allowable subject matter recited in claim 29 is rewritten in independent form with features of base claim 19 and intervening claims 26, 27 and 28, and the allowable subject matter recited in claim 33 is rewritten in independent form with features of base claim 19 and intervening claims 26, 31 and 32. *Fushiki, Hiramatsu, Hauck and Hordley*, whether taken alone or in any combination, fail to anticipate or render obvious claims 29 and 33, as currently presented. As discussed with the Examiner on May 7, 2009, claims 29 and 33 are believed to be in condition for allowance.

Claims 20-25, 30, 35 and 36 now depend upon claim 29, and new claims 62-69 (which parallel dependent claims 20-25, 30, 35 and 36) depend upon claim 33. All of claims 20-25, 30, 35, 36 and 62-69 should be allowable over the applied art for at least reasons similar to those in connection with the corresponding base claims. The timely allowance of independent claims 29 and 33, and their respective dependent claims, is accordingly requested.

It is submitted that the amendments made herein place claims 2-7, 11, 12, 15-18, 20-25, 29, 30, 33-36 and 54-69 in condition for allowance. These amendments, however, have been made to expedite issuance of a patent and do not constitute a concession that the claim rejections are proper or acquiescence with positions set forth in the Office Action. The absence of a reply to any specific statement or assertion in the Office Action does not signify agreement with or concession of any statement or characterization in the Office Action. Thus, there may be reasons for patentability of one or more of claims 2-7, 11, 12, 15-18, 20-25, 29, 30, 33-36 and 55-69 that have not been expressed in this paper.

Regarding the section 101 rejection

The Office Action rejected claims 1-10, 13, 14, 17 and 18 under 35 U.S.C. 101 as allegedly directed to non-statutory subject matter, asserting that the claims “neither transform underlying subject matter nor positively tie to another statutory category that accomplishes the claimed method steps.” Office Action at 2. The Office Action asserts that “such steps can be performed manually without the use of a structure.” *Id.* at 3.

The section 101 rejection of claims 1, 8-10, 13 and 14 is deemed moot by the cancellation of those claims. Further—without conceding the propriety of a section 101 rejection of claims 11 and 15—claims 11 and 15 are amended as suggested by the Examiner on May 7, 2009.³ In particular, claims 11 and 15 are amended to explicitly recite that operations are performed by “at least one processor.” In addition, claims 11 and 15 are amended to recite, *inter alia*, outputting

³ Claims 11 and 15 were not rejected as directed to non-statutory subject matter. As the Examiner explained on May 7, 2009, such claims were not rejected because they inherently tie to a particular machine or apparatus. Although claims 11 and 15 are believed to be statutory under section 101, these claims have been amended, in accordance with the Examiner’s suggestion, to explicitly tie the claims to a particular machine and to avoid a section 101 rejection of these claims in a subsequent Office Action.

the image to “an electronic device.” Claims 11 and 15, as well as their respective dependent claims, are clearly statutory under section 101.

Section 103 rejection based on *Fushiki*, *Hiramatsu* and *Hauck*

The section 103 rejection of claims 1, 8, 9, 13, 19, 26, 27 and 31 is deemed moot by the cancellation of those claims. Further, the section 103 rejection of claims 2, 3, 5-7, 17, 18, 20, 21, 23-25 and 36 should be withdrawn, since all of these claims now depend upon one of claims 11 and 29, which are not rendered obvious by *Fushiki*, *Hiramatsu* and *Hauck*.

Regarding claims 42-47, the section 103 rejection should be withdrawn because *Fushiki*, *Hiramatsu* and *Hauck* do not support a conclusion of obviousness.

Independent claims 42 and 44, although of different scope, both recite *inter alia*:

improving color accuracy of conversion of an image color space of an image by affecting two or more processing stage definitions of a transform-defining element in a color profile associated with a defined image processing pipeline, based on image parameters, such that the defined image processing pipeline transcodes an image component according to a range and an offset, the two or more processing stage definitions being affected during generation of the color profile, and the affecting comprising defining a mapping of the range and the offset in a multidimensional interpolation table stage of the transform-defining element and fitting output to input data scopes between two of the processing stage definitions, and the image comprising a parameterized encoding of the image color space with the image parameters defining the range and the offset of the image component of the image.

Fushiki and *Hiramatsu*—whether taken alone or in any combination—fail to teach or suggest at least affecting two or more processing stage definitions of a transform-defining element in a color profile during creation of the color profile, as recited in claims 42 and 44. *Fushiki* describes performing color processing operations (e.g., gamut mapping, saturation adjustment, alpha-masking, drop-shadow, transparency and contrast) in the more suitable one of two color spaces (perceptual-based and physical based) to optimize the quality and performance of color processing. See *Fushiki*, col. 6, lines 3-45; Fig. 3. The reference does not disclose or suggest “affecting” two or more processing stage definitions of a transform-defining element in a

color profile “during generation of the color profile,” where the affecting comprises “defining a mapping of the range and the offset in a multidimensional interpolation table stage of the transform-defining element,” as claimed.

Although *Fushiki* discusses an ICC profile, the reference does not disclose or suggest affecting (e.g., influencing) processing stage definitions of a transform-defining element in the ICC color profile “during generation” of the profile. Even if *Fushiki*’s processing sequence shown in Fig. 3 were to include processing stage definitions of a transform-defining element (which is not conceded), the reference does not disclose or suggest “affecting” the operations “during generation” of the ICC profile. *Fushiki* does not disclose or suggest how the ICC profile or color data are generated or what would occur during such generation. In fact, the Office Action acknowledges that *Fushiki* fails to disclose that a color profile is generated. See Office Action at 7.

The Office Action asserts that “Fushiki is obviously affecting at least two processing stages as the input data is raw data that has been converted into the perceptual based color space and then transformed to the physical color space.” Office Action at 30. But this statement in the Office Action does not establish that *Fushiki* discloses or suggests the claimed “affecting” features. Whether or not raw data is converted into a perceptual based color space and then transformed to a physical color space, *Fushiki* simply does not disclose or suggest that processing stage definitions of a transform-defining element in a color profile associated with a defined image processing pipeline, which is used to translate from one color space to another, are affected during generation of the color profile.

Moreover, *Fushiki* does not disclose or suggest that such “affecting” comprises “defining a mapping of the range and the offset in a multidimensional interpolation table stage of the transform-defining element,” as claimed. *Fushiki* discusses an ICC profile and performing color processing operations, but it nowhere discloses or suggests defining a mapping of the range and the offset (of the image component of an image) in a multidimensional interpolation table stage of a transform-defining element in a color profile associated with a defined image processing pipeline during generation of the color profile, as claimed.

Hiramatsu does not cure the deficiencies of *Fushiki* with respect to claims 42 and 44. *Hiramatsu* is directed to color matching. See Abstract; par. [0002]. *Hiramatsu* describes color conversion processing and color space profiles, but the reference does not disclose or suggest affecting two or more processing stage definitions of a transform-defining element in a color profile during generation of the color profile, as claimed. Although *Hiramatsu* discusses color space profiles (Fig. 4, S401; Fig. 15, S1501) and conversion parameters (see par. [0025], [0083], [0085]), the reference does not disclose or suggest affecting two or more processing stage definitions of a transform-defining element in any such space profile, based on image parameters, during creation of the profile. Indeed, *Hiramatsu* does not disclose or suggest that the obtained color space profiles define the color conversion processing or that any of the conversion processing is affected based on image parameters during generation of any such profile. Like *Fushiki*, *Hiramatsu* does not disclose or suggest how profiles are generated or what occurs during generation. Indeed, the Office Action acknowledges that *Fushiki* fails to disclose that a color profile is generated. See Office Action at 7.

Moreover, *Hiramatsu* does not disclose or suggest that such “affecting” comprises “defining a mapping of the range and the offset in a multidimensional interpolation table stage of the transform-defining element,” as claimed. As the Office Action notes, *Hiramatsu* describes color matching processing performed by a color matching device. See *Hiramatsu* at Fig. 4; see Office Action at 14. In the first step (S401), the specific color data of the respective color spaces are obtained (§ 0082, Claim 1). In a subsequent step (S403), a color space compression parameter is set based on the data obtained (§ 0083, Claim 1). *Hiramatsu*’s color matching processing does not disclose or suggest the claimed “affecting” features. In particular, *Hiramatsu* does not disclose that, during generation of a color profile that is used to transform from one color space to another, a mapping of the range and the offset (of the image component of an image) is defined in a multidimensional interpolation table stage of a transform-defining element in the color profile.

Hauck does not cure the deficiencies of *Fushiki* and *Hiramatsu*. *Hauck* is directed to generating a color profile as a function of a mapping of a device-independent process space to a device-dependent process space. See Abstract. While *Hauck* describes generating a color

profile, the reference does not disclose or suggest at least “affecting” two or more processing stage definitions of a transform-defining element in a color profile “during generation of the color profile,” where the affecting comprises “defining a mapping of the range and the offset in a multidimensional interpolation table stage of the transform-defining element,” as claimed. Indeed, the Office Action does not assert that *Hauck* discloses affecting two or more processing stage definitions during generation of the color profile.

Fushiki, *Hiramatsu* and *Hauck*—whether taken alone or in any combination—thus fail to teach or suggest each and every element of claims 42 and 44, and no basis has been provided for concluding that it would have been obvious to a skilled artisan to bridge the gap between the applied references and what is now claimed. *See* MPEP § 2141(III). Further, there would have been no apparent reason, absent impermissible hindsight gleaned from the present application, to modify or combine the applied references to arrive at what is claimed. *See* MPEP §§ 2141, 2142. For at least these reasons, the section 103 rejection of claims 42 and 44, and their respective dependent claims 43 and 45, should be withdrawn.

Independent claim 46 recites a combination including:

means for taking image parameters into account across two or more processing stage definitions of a transform-defining element in a color profile associated with a defined image processing pipeline during generation of the color profile for the image . . . the means for taking image parameters into account includes means for defining a mapping of the range and the offset in a multidimensional interpolation table stage of the transform-defining element

Fushiki does not disclose or suggest at least means for “taking image parameters into account across two or more processing stage definitions of a transform-defining element in a color profile associated with a defined image processing pipeline during generation of the color profile for the image,” where the means for taking image parameters into account includes means for “defining a mapping of the range and the offset in a multidimensional interpolation table stage of the transform-defining element,” as recited in claim 46.

Although *Fushiki* discusses an ICC profile, the reference does not disclose or suggest “taking image parameters into account across two or more processing stage definitions of a

transform-defining element” in the ICC color profile “during generation” of the profile. *Fushiki* does not disclose or suggest how the ICC profile or color data are generated or what would occur during such generation. In fact, the Office Action acknowledges that *Fushiki* fails to disclose that a color profile is generated. See Office Action at 7.

Moreover, *Fushiki* does not disclose or suggest means for “defining a mapping of the range and the offset in a multidimensional interpolation table stage of the transform-defining element,” as claimed. *Fushiki* discusses an ICC profile and performing color processing operations, but it nowhere discloses or suggests means for defining a mapping of the range and the offset (of the image component of an image) in a multidimensional interpolation table stage of a transform-defining element in a color profile associated with a defined image processing pipeline during generation of the color profile, as claimed.

Hiramatsu does not cure the deficiencies of *Fushiki* with respect to claim 46. Although *Hiramatsu* discusses color space profiles (Fig. 4, S401; Fig. 15, S1501) and conversion parameters (see par. [0025], [0083], [0085]), the reference does not disclose or suggest “taking image parameters into account across two or more processing stage definitions of a transform-defining element” in any such space profile “during generation” of the profile. Furthermore, *Hiramatsu* fails to disclose or suggest “defining a mapping of the range and the offset in a multidimensional interpolation table stage of the transform-defining element,” as claimed.

Hauck does not cure the deficiencies of *Fushiki* and *Hiramatsu* with respect to claim 46. *Hauck* describes generating a color profile, but the reference does not disclose or suggest at least means for “taking image parameters into account across two or more processing stage definitions of a transform-defining element in a color profile associated with a defined image processing pipeline during generation of the color profile for the image,” where the means for taking image parameters into account includes means for “defining a mapping of the range and the offset in a multidimensional interpolation table stage of the transform-defining element,” as claimed.

Fushiki and *Hiramatsu*—whether taken alone or in any combination—thus fail to teach or suggest each and every element of claim 46, and no basis has been provided for concluding that it would have been obvious to a skilled artisan to bridge the gap between the applied references and what is now claimed. See MPEP § 2141(III). Further, there would have been no

apparent reason, absent impermissible hindsight gleaned from the present application, to modify or combine the applied references to arrive at what is claimed. *See* MPEP §§ 2141, 2142. For at least these reasons, the section 103 rejection of claim 46, and its dependent claim 47, should be withdrawn.

Section 103 rejection based on *Fushiki, Hiramatsu, Hauck and Hordley*

The section 103 rejection of claims 10, 14, 28 and 32 is rendered moot by the cancellation of those claims. Further, claims 4 and 32 depend upon claims 11 and 29, respectively, and thus are not anticipated or rendered obvious by the applied art for at least reasons similar to those in connection with base claims 11 and 29. The section 103 rejection of claims 4 and 32 should therefore be withdrawn.

New claims 48-69

Each of new claims 48-53 depends upon one of claims 42, 44 and 46 and is similarly not anticipated or rendered obvious by the applied art. Moreover, *Fushiki, Hiramatsu, Hauck and Hordley*, whether taken alone or in any combination, do not disclose or suggest that the “affecting” comprises “making entries of the multidimensional interpolation table positive and normalizing the entries in the multidimensional interpolation table,” as recited in new claims 48 and 50, or that the means for taking image parameters into account comprises “means for making entries of the multidimensional interpolation table positive and normalizing the entries in the multidimensional interpolation table,” as recited in new claim 52. Nor do the applied references—alone or in any combination—disclose or suggest “generating a second processing stage that denormalizes output of the first processing stage, applies a nonlinear function and scales by a scaling factor” and “generating a third processing stage that denormalizes output of the second processing stage and performs the chromatic adaptation,” as recited in new claims 49 and 51, or the “means for generating” features recited in new claim 53. The timely allowance of new dependent claims 48-53 is accordingly requested.

As explained above, new claims 54-61 depend upon claim 15 and parallel dependent claims 2-7, 12, 17 and 18. New claims 62-69 depend upon claim 33 and parallel dependent claims 20-25, 30, 35 and 36. New dependent claims 54-69 should be allowed over the applied

art for at least reasons similar to those in connection with the corresponding base claims. The timely allowance of new dependent claims 54-69 is accordingly requested.

Conclusion

This paper requests the Examiner's reconsideration of the application in view of the amendments and the foregoing remarks, withdrawal of the rejections and objections, and the timely allowance of pending claims 2-7, 11, 12, 15-18, 20-25, 29, 30 and 33-69.

It is believed that all pending issues in the Office Action have been addressed by this paper. The Office Action, however, contains a number of statements reflecting characterizations of the related art and the claims. Whether or not any such statement is identified herein, this paper declines to automatically subscribe to any statement or characterization in the Office Action. The absence of a reply to any specific statement or assertion in the Office Action does not signify agreement with or concession of any statement or characterization in the Office Action. In addition, there may be reasons for patentability of any or all pending or other claims that have not been expressed above. Nothing in this paper should be construed as an intent to concede any issue with regard to any claim, except as specifically stated in this paper.

In view of the above, a notice of allowance is respectfully requested. To the extent the patentability of the claims remains in dispute, an additional telephone interview with the Examiner to discuss the subject matter of the claims and the applied art is respectfully requested since this may expedite prosecution of the application.

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App. No. : 10/821,164
Filed : April 7, 2004
Page : 30 of 30

Attorney Docket No.: 07844-0647001 / P600

The excess claims fee ($2 \times \$220 + 10 \times \$52 = \$960$) is being paid concurrently herewith on the Electronic Filing System (EFS) by way of Deposit Account authorization. Please grant any extensions of time required to enter this paper and apply any other required charges or credits to Deposit Account No. 06-1050.

Respectfully submitted,

Date: May 8, 2009

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